

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
6 May 2004 (06.05.2004)

PCT

(10) International Publication Number
WO 2004/037773 A1

(51) International Patent Classification⁷: **C07C 317/22**,
323/19, C07D 213/66, 215/22, 215/26, 261/10, 309/40,
319/08, 263/22, A61K 31/145, 31/435, A61P 11/00

(74) Agent: **FLORENCE, Julia, Anne**; GlaxoSmithKline,
Corporate Intellectual Property (CN925.1), 980 Great
West Road, Brentford, Middlesex TW8 9GS (GB).

(21) International Application Number:
PCT/EP2003/012035

(22) International Filing Date: 24 October 2003 (24.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0225022.3 28 October 2002 (28.10.2002) GB
0225028.0 28 October 2002 (28.10.2002) GB

(71) Applicant (for all designated States except US): **GLAXO
GROUP LIMITED** [GB/GB]; Glaxo Wellcome House,
Berkeley Avenue, Greenford, Middlesex UB6 0NN (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHAPMAN, Alan,
Michael** [GB/GB]; GlaxoSmithKline, Old Powder Mills,
Near Leigh, Tonbridge, Kent TN11 9AN (GB). **GUNTRIP,
Stephen, Barry** [GB/GB]; GlaxoSmithKline, Gunnels
Wood Road, Stevenage, Hertfordshire SG1 2NY (GB).
LOOKER, Brian, Edgar [GB/GB]; GlaxoSmithKline,
Gunnels Wood Road, Stevenage, Hertfordshire SG1 2NY
(GB). **PROCOPIOU, Panayiotis, Alexandrou** [GB/GB];
GlaxoSmithKline, Gunnels Wood Road, Stevenage, Hert-
fordshire SG1 2NY (GB).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,
RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(48) Date of publication of this corrected version:

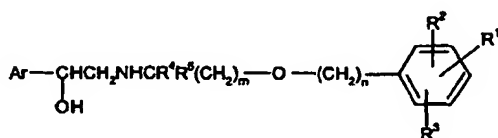
22 July 2004

(15) Information about Correction:

see PCT Gazette No. 30/2004 of 22 July 2004, Section II

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: PHENETHANOLAMINE DERIVATIVE FOR THE TREATMENT OF RESPIRATORY DISEASES



(I)

(57) Abstract: The present invention relates to novel com-
pounds of formula (I), to a process for their manufacture, to
pharmaceutical compositions containing them, and to their
use in therapy, in particular their use in the prophylaxis and
treatment of respiratory diseases.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/12035

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C317/22 C07C323/19 C07D213/66 C07D215/22 C07D215/26
 C07D261/10 C07D309/40 C07D319/08 C07D263/22 A61K31/145
 A61K31/435 A61P11/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C C07D A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BEILSTEIN Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02 066422 A (MONTEITH MICHAEL JOHN ;BIGGADIKE KEITH (GB); COE DIANE MARY (GB);) 29 August 2002 (2002-08-29) claims ---	1-21
A	GB 2 140 800 A (GLAXO GROUP LTD) 5 December 1984 (1984-12-05) cited in the application claims ---	1-21
P, A	WO 03 024439 A (COE DIANE MARY ;GLAXO GROUP LTD (GB); BOX PHILIP CHARLES (GB); LOO) 27 March 2003 (2003-03-27) claims -----	1-21



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

17 February 2004

Date of mailing of the international search report

26/02/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Chouly, J

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/12035

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claim 15 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/12035

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02066422	A	29-08-2002	CA 2437977 A1	29-08-2002
			CZ 20032189 A3	14-01-2004
			WO 02066422 A1	29-08-2002
			EP 1360174 A1	12-11-2003
			NO 20033594 A	02-10-2003
GB 2140800	A	05-12-1984	AT 390611 B	11-06-1990
			AT 129184 A	15-11-1989
			AU 573212 B2	02-06-1988
			AU 2706484 A	25-10-1984
			BE 899448 A1	18-10-1984
			BE 900835 A4	17-04-1985
			BG 61490 B2	30-09-1997
			CA 1335999 C	20-06-1995
			CA 1336004 C	20-06-1995
			CH 661497 A5	31-07-1987
			CH 667084 A5	15-09-1988
			CZ 9104028 A3	12-05-1993
			CY 1482 A	08-12-1989
			CZ 285602 B6	15-09-1999
			DE 3414752 A1	18-10-1984
			DE 3448338 C2	19-05-1993
			DE 3448452 C2	05-01-1994
			DK 158092 A	30-12-1992
			DK 201784 A	19-10-1984
			ES 8505641 A1	01-10-1985
			ES 8609209 A1	16-12-1986
			FI 841548 A ,B,	19-10-1984
			FR 2545482 A1	09-11-1984
			GB 2176476 A ,B	31-12-1986
			GR 79925 A1	31-10-1984
			HK 36889 A	12-05-1989
			HU 200160 B	28-04-1990
			IE 57237 B1	17-06-1992
			IL 71569 A	30-10-1987
			IT 1199112 B	30-12-1988
			JP 1862136 C	08-08-1994
			JP 5069817 B	01-10-1993
			JP 63264443 A	01-11-1988
			JP 1643826 C	28-02-1992
			JP 3000858 B	09-01-1991
			JP 59199659 A	12-11-1984
			JP 2001385 C	20-12-1995
			JP 6087800 A	29-03-1994
			JP 7029997 B	05-04-1995
			KE 3864 A	19-05-1989
			KR 9204186 B1	30-05-1992
			LU 85329 A1	04-06-1985
			LU 88265 A9	03-02-1994
			MX 9203226 A1	01-07-1992
			NL 8401258 A ,B,	16-11-1984
			NO 841568 A ,B,	19-10-1984
			NZ 207885 A	29-11-1988
			NZ 221999 A	29-11-1988
			PH 21574 A	11-12-1987
			PT 78443 A ,B	01-05-1984
WO 03024439	A	27-03-2003	WO 03024439 A1	27-03-2003